

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY

MEETING OF MARCH 4, 1930

A regular meeting of the New York Entomological Society was held at 8 P. M., on March 4, 1930, in the American Museum of Natural History; President Wm. T. Davis in the chair with eighteen members and four visitors present.

Mr. Davis exhibited the Annual Report of the Association of the Graduates of the United States Military Academy, published June 12, 1929, and containing an obituary of Col. Wirt Robinson which included a tribute written by Mr. Davis.

He also exhibited and read, in part, a poem written by James G. Needham entitled "Nature Study."

Mr. Bromley read an exhaustive account of "Bee-Killing Robberflies" which will be printed in full. He reviewed the early work of Asa Fitch and C. V. Riley, and the subsequent literature, and then passed to a detailed account of the species in connection with killing habits, if any, leading to the conclusion that *Promachus fitchii* was the most likely to become of economic importance, with some species of *Mallophora* less likely. Mr. Bromley closed his remarks with lantern slide illustrations of several species showing their method of attack.

In the discussion which followed in which Mr. Schwarz, Dr. Felt and Mr. Davis took part, it was disclosed that *Promachus fitchii*, abundant in fields where its larvæ feed on white grubs, might destroy 140 honey bees in a day and thus be harmful to near-by apiaries. Dr. Felt spoke of the pain inflicted by robberflies, being like the jab of a needle, and Mr. Davis described the large, sharp spines on the hind legs of *Midas*. The latter also spoke of the varied transformations of robberflies, one subfamily using the soil, another always preferring wood.

Mr. Davis exhibited a leaf of redbud which he had found at Great Falls, Md., June 27, 1914, with twenty symmetrical holes around its edge, cut by a species of upholsterer bee, as well as other examples of their work and some of the bees identified many years ago by Dr. Ashmead.

Mr. Schwarz exhibited a contribution to the Ecology of Melipomene Bees by Dr. George Salt.

MEETING OF MARCH 18, 1930

A regular meeting of the New York Entomological Society was held at 8 P. M. on March 18, 1930, in the American Museum of Natural History; President Wm. T. Davis in the chair with eighteen members and nine visitors present.

The president exhibited with praise Dr. Kinsey's work on "Gall Midges of the genus *Cynips*." Dr. Lutz joined in its praise as did Dr. Felt, who spoke of the extensive material studied, amounting to 37,000 wasps and 50,000 galls, and of the connection of alternate generations being still comparatively unknown.

Mr. Bird under the title "A Lepidopterous Anomaly—The Emergence of Many Moths from a Single Cocoon" told an entertaining story of one of his best records, which will be printed in full. The cocoon was that of a *Luna* moth; the seventeen tineid moths which emerged had their pupa shells hooked on to the cocoon. In the discussion that followed, in which Messrs. Davis, Angell, Lemmer and Dr. Felt took part, the habits of tineid moths were mentioned and the theory of polyembryonic emergence was explained by Mr. Bird with special reference to his own experience in rearing 1,732 parasites from one *Plusia* caterpillar.

Dr. Lutz spoke briefly of the reproduction for the sound movies of the cricket's shrill tones, describing the capture of the crickets, the cages made from lantern globes, in which they were kept and the process of recording their stridulations. The remarkable corollary, which came from his subsequent study of the film produced, showed that what sounds like a single note is in reality three pulses.

Mr. Davis exhibited a ♂ *Panchlora*, a green cockroach, which had matured in captivity about March 12, and read a paper on ovoviviparity in roaches which will be printed in full. He also mentioned several instances of butterflies being attacked by crab-spiders, viz.: August 13, 1905, at Tottenville—*Papilio troilus* found dead roadside, a small crab-spider attached; September 5, 1911, at Yaphank—*Pyrameis huntera* found dead in the same way; July 21, 1929, at Stamford, Conn.—*Chrysophanus hypophlaeus* seen on *Rudbeckia*, from which it flew with the crab spider attached. On the same visit to Stamford the bean beetle was seen and studied.

Mr. Bromley spoke of the abundance of *Paratenodera sinensis* in New Jersey, Pennsylvania, and Staten Island, and of the introduction of Staten Island eggs at Stamford.

Dr. Lutz added that Hartford was another point in Connecticut where the insect has been introduced.

Mr. Lemmer exhibited the moth *Zale lunata*, which hibernated, and *Zale mineria* which does not.

MEETING OF APRIL 1, 1930

A regular meeting of the New York Entomological Society was held at 8 P. M., on April 1, 1930, in the American Museum of Natural History; President Wm. T. Davis in the chair with twenty members and six visitors present.

Dr. Felt read a considerable number of verses relating to insects, quoting from more than fifty authors and closing with a selection from Dr. Holland's Moth Book, written in prose but embodying poetical ideas.

The subject interested many of the members, Dr. Lutz, Messrs. Angell, Davis, Curran, Bromley and others contributing verses which lived in their memories.

Mr. Mutchler spoke of the Palm Weevil, and Mr. Davis added from his Floridian experiences the delicate meal which its larvæ afford raccoons.

Mr. Bromley proposed for membership: Mr. Cecil W. Coates, 508 Produce Exchange, New York City.

MEETING OF APRIL 15, 1930

A regular meeting of the New York Entomological Society was held at 8 P. M. on April 15, 1930, in the American Museum of Natural History; President Wm. T. Davis in the chair with twenty-one members and twelve visitors present.

The following members were elected:

Mr. Cecil W. Coates, 508 Produce Exchange, New York City.

Mr. E. G. Smyth, Hacienda Cartavio, Saleverry, Peru.

The following publications were exhibited:

Proceedings Fourth International Congress of Entomology, with group photograph.

List of the Cicindelidæ of America, North of Mexico, by Dr. W. Horn.
Index to Publications of the Department of Agriculture.

Proceedings of the Staten Island Institute of Arts and Sciences.

Dr. William Moore spoke of "Reactions of Clothes Moth Larvæ" with lantern slide illustrations. His remarks, which related principally to the webbing clothes moth, covered a series of experiments to determine the value of various methods of combating this pest. It was shown that the moth prefers to work in darkness, and that all the usual repellents were of some value, cinchona alkaloids especially. Applications designed to poison the larvæ were also considered.

In the discussion following Dr. Moore's address, in which Messrs. Davis, Safro, Bromley, Huntington and Dr. Britton participated, the value of sunlight, cleanliness, cedar chests, and cold storage, the latter producing principally a state of quiescence, were considered.

Mr. Wurster exhibited an extraordinary specimen of *Polyphemus*, hatched from one of about 600 cocoons received from the vicinity of Chicago, melanism producing an almost entirely black moth.

MEETING OF MAY 6, 1930

A regular meeting of the New York Entomological Society was held at 8 P. M., on May 6, 1930, in the American Museum of Natural History; President Wm. T. Davis in the chair with twenty-six members and thirteen visitors present.

The death of Dr. Morton R. Peck on March 11, and of Dr. Wm. Barnes on May 1, 1930, was announced.

Letters from John D. Sherman, Jr., from Egypt, to Mr. Davis and from Italy to Mr. Leng were read.

J. D. Gunder's account of the Department of Lepidoptera in the American Museum of Natural History was shown.

Mr. Frank Morton Jones made an address on "Collecting in the Southern Everglades: the Sleeping Heliconias" illustrated by lantern slides, photographs, and specimens of the insects he collected. From headquarters at the Lodge on Royal Palm Hammock Mr. Jones explored in 1929 and again in 1930 a number of the hammocks in the Everglades which since 1883 have become gradually accessible, and which yield a considerable number of subtropical insects. After a general description of this interesting locality, its fauna and flora, and references to Theodore L. Mead, still living in Florida, Dr. W. S. Blatchley, who has made important studies of the Coleoptera, the Grossbeck-Watson list of Lepidoptera, and the assistance of Warden Wheelock, Mr. Jones proceeded with a detailed account of his observations of the early morning flight of *Tabanus americanus* ♂, and of the sleeping habits of *Heliconia* butterflies. These observations will be printed in full.

In the discussion which followed Mr. Huntington described similar butterfly habits in Trinidad, and Mr. Engelhardt those he had observed in Panama, Guatemala and British Honduras. Mr. Curran also told of a "Morpho Lodge" at Barro Colorado where four, five or even seven of those large butterflies were repeatedly seen.

In regard to the hovering habits of *Tabanus*, Mr. Davis and Mr. Bromley made some comments, the latter stating that the morning serenade by the males was known only in Southern Florida.

Mr. Davis exhibited a cicada of the genus *Plantilla*, showing a concave abdomen, decked over by a transparent membrane, which had been collected by W. Judson Coxie in Ecuador, and received through Dr. Goodwin.

Mr. Wurster exhibited a photograph of the melanistic *Polyphemus* he had shown at preceding meeting.

Mr. Angell spoke of collecting *Ceruchus piceus* at Vermont.

MEETING OF MAY 20, 1930

A regular meeting of the New York Entomological Society was held at 8 P. M., on May 20, 1930, in the American Museum of Natural History; President Wm. T. Davis in the chair with fourteen members and four visitors present.

The President called for spring collecting experiences.

Mr. De Ghika exhibited caterpillars obtained from breeding a male *Erannis tiliaria* from Rye, New York, with a female *Hyberna defoliaria* from Hamburg, Germany, the result being possibly similar to melanistic forms of these geometers.

In the discussion of this matter Mr. Davis showed a specimen of *Ectropis crepuscularia* aberration *fumateria* Minot (defessaria Frey), and Mr. De

Ghika told of the curious outcome of an experiment which produced an equal number of albinistic and melanistic forms.

Mr. Huntington and others spoke of the poor luck at Greenwood Lake and Jamesburg though *Anthocaris genutia* was found at the former locality.

Mr. Nicolay spoke with more enthusiasm of his trip with Mr. Quirsfeld to Piermont, N. Y., where *Oodes*, *Chlaenius*, and other Carabidæ were found as well as *Cicindela limbalis*. In connection with the latter species Mr. Nicolay expressed some dissatisfaction with the recently published Check List by Dr. Walther Horn.

Mr. Curran exhibited Dr. Shiraki's recent work on the Syrphidæ of Japan, in which 302 species are treated. In connection with Mr. Curran's work on the Syrphidæ of the Malay States, a fairly complete view of the fauna of the Far East is now attainable.

Mr. Wm. T. Davis exhibited many golden rod galls of the moth *Gnorimoschema gallæ-solidaginis* Riley that he had found in the Fort Wadsworth Reservation on Staten Island. The galls were very common over a small area and nearly all of them had been opened presumably by mice. As the galls were opened near the bottom the mouse had in some instances apparently failed to observe that the moth had already escaped from the hole near the top and so found but an empty pupa case; a less substantial meal.

He also showed many other galls, cocoons, acorns, etc., that had been opened by squirrels, mice and woodpeckers, in quest of the fat grubs to be found within.

The remarks of Mr. Davis were discussed by Messrs. Wurster, De Ghika, Huntington, Watson and Bird, the latter stating that mice preferred a pupal diet, requiring a close attention to dates on their part.

Mr. Mutchler spoke of Mr. Wunder's success in rearing Mantis on Fruit fly.

MEETING OF OCTOBER 7, 1930

A regular meeting of the New York Entomological Society was held at 8 P. M., on October 7, 1930, in the American Museum of Natural History; President Wm. T. Davis in the chair with nineteen members and thirteen visitors present.

The President reported the death of Mrs. Anna Botsford Comstock on August 24, 76 years of age, and his sending of a telegram in the name of the Society to Dr. Comstock, which action was approved.

The president also called attention to locality labels printed by A. C. Davis in California.

The secretary spoke of letters from Mr. Sherman, traveling with his family in Egypt and Europe, and to a cartoon by Herbert Johnson in the Saturday Evening Post of September 13, 1930, exhibiting *Paratenedera sinensis* as the Market Bug.

Mr. Charles Louis Pollard exhibited a box of Lepidoptera and spoke of the "Habits of Equatorial Butterflies" as observed by him during his

recent sojourn in Para and Iquitos as collector for Mr. Frank Johnson. In the vicinity of Para, where approximately 600 species are to be found, three environments were recognized, 1, cultivated park lands and fields; 2, cleared open forest land, and 3, the forest or jungle in which by far the greater part of the species were to be found. This was explained, as Mr. Pollard thought, partly by the liking the butterflies showed for exudations from the forest trees, partly by the protection afforded by the forest from such enemies as lizards and spiders. Taking up a few of the many species, and making use of the observations of Rev. Miles Moss which extend over 18 years at Para, Mr. Pollard spoke of the *Aristolochia Papilios* with an unpleasant odor and of their enemies devoid of such odor, of the five species of *Morpho* and their rapid flight, and of several other species, with methods of collecting.

His remarks were discussed by Messrs. Davis, Bell, Bromley, Huntington, and by Dr. Lutz, who said that the Morphos were sometimes called "Helio-graph Bug" in Panama.

Mr. Frank Johnson exhibited nine specimens of *Morpho wga* from Sta. Catharine in southern Brazil, arranged to show five females, one hermaphrodite and three males, in a progressive series of color.

Mr. Johnson also mentioned a *Papilio ajax* seen in July on the golf course at Rahway, New Jersey.

The president called for summer collecting experiences.

Mr. Watson considered the season poor for many species of butterflies, though *Colias eurytheme* had been common, and *eubele* had been seen at Oakwood Beach, Staten Island.

Mr. Bell, who had spent much of the summer in Nevada where he had obtained some Cicadas for Mr. Davis, reserved his account of the Lepidoptera for a later occasion.

Messrs. Huntington, Curran, Hall, Sheridan, and Moennich made brief reports, the latter pointing out the apparently greater size attained by *Cicindela 6-guttata* in the northern states.

Mr. Nicolay had visited Moosehead Lake, where he found *Cicindela harrisi*, and Washington, D. C., which he found dry.

Mr. Hartzell was continuing his studies of *Cicadula*. It is known that *C. 6-notata* carries the aster yellows. Other species, *C. petoria*, *lepida*, and *slossoni* were also studied; it is not known whether or not these are disease carriers.

Mr. Hartzell also spoke of *Aserica castanea* grubs as prevalent in lawns; and of the flight of *Mantis*.

Mr. Angell exhibited a box of summer captures, including *Dorcas brevis*, the fourth specimen known. It was found dead in the rock at Lakehurst, New Jersey, on August 18, by Chas. Ballou.

Other species were:

Dorcas parallelus Female, Cooks Falls, New York. In dead maple stump. September 15, 1930. J. W. Angell.

Dorcas parallelus Female, Selkirk Beach, Lake Ontario, New York. In wash-up. July 7, 1930. Chas. Ballou, Jr.

Platyceus quercus (♂ & ♀), Dumont, New Jersey.

Ceruchus piceus (♂ & ♀), Kensico, New York. In dead hemlock. September 21, 1930. J. W. Angell.

Nicagus obscurus (♂ & ♀), Sylvan Beach, Lake Ontario, New York. Flying over vegetation. Chas. Ballou, Jr.

Cicindela ancocisconensis, Cooks Falls, New York. September 15, 1930. J. W. Angell.

Cicindela hirticollis, Sylvan Beach, Lake Ontario, New York. June 2, 1930. Chas. Ballou, Jr.

Necrophorus pustulatus, Lakewood, New Jersey. In flight. July 5, 1930. Alfred J. Kestler.

Dr. Lutz had spent much of the summer in Yellowstone National Park engaged mainly on outdoor educational projects. Opportunities for studying the insects of the hot springs and effluent streams were, however, found. In the course of his visit he had met Dr. Brues and Dr. Van Dyke.

Mr. Mutchler spoke of the work in progress on the beetles of Porto Rico; and of the migration of Monarch butterflies observed in Connecticut by Dr. Sherwood, director of the American Museum of Natural History. While more abundant than in recent years, the number was less than has been previously recorded.

The subject of Monarch migration and the scarcity of the species in some years was discussed by Dr. Lutz, Messrs. Davis, Watson and Bell with a suggestion, based on finding bacterial disease in its caterpillars by F. Martin Brown, that their pronounced scarcity in certain years might be connected with poison intended for Gypsy Moth—the Monarch playing the part of “innocent bystander.” The abundance this year in Connecticut and Massachusetts of *Alypia argillacea* accompanied by some *Haliotis obsoleta* was also noted.

Mr. Leng mentioned the finding on Staten Island by Messrs. Burke, Stecher and Davis of *Ptinella querci* and *Zaglyptus sulcatus* in a much decayed black birch log at Willow Brook.

Mr. Wm. T. Davis showed two walking-stick insects, *Manomera atlantica* Davis, collected on Staten Island in the Fort Wadsworth Reservation at the Narores. The adult specimen found on a golden rod August 4, died September 4, 1930. It laid fifty-three eggs during its captivity, some of which were shown, together with several of the attenuated masses of excrement about 4 millimeters in length. This species was first described in 1923, Staten Island being the type locality, and while diligent search has been made for males, none have been found. Males of the closely allied *Manomera blatchleyi* of Indiana, Illinois, etc., have been collected.

Mr. Bromley said that further observations at the Bartlett Tree Research Laboratories on the Norway maple stem miner, *Nepticula sericopeza* Zeller, a European moth first discovered in this country near Stamford, Connecti-

cut, where it was causing partial defoliation to Norway maples have shown that this season the species reverted to its original habit of mining the seed key. An abundance of seeds were produced this season by the Norway maple and the infestation of this insect was practically confined to these. It is thought that the leaf stem mining is secondary, occurring when seed keys are scarce. The moth itself is a small, satiny, black species with silvery spots on the wings and an orange tuft on the head and may be found in the day-time resting on the bark of the Norway maple trees.

The cynipids producing the woody oak galls are known to have a complicated life history. Studies on the species causing the so-called horned galls on pin oak have shown that the alternate generation produces small galls on the leaves and is of short duration, but that the generation occurring in the woody galls probably takes at least two years to develop.

Mr. Bromley did some collecting during the past season on eastern Long Island, in the region near Wading River, where the Asilid fauna was found to be varied and abundant. A species new to the New York State list was taken, namely *Bombomima virginica* Banks.

A trip to the sand hill region of South Carolina during the latter part of August and early September also yielded some very interesting species of robberflies. Among the specimens taken was the large bumble bee-like *Mallophora rex* Bromley. Note was made of the abundance of the large cicada, *Tibicen resonans*, whose loud song reverbrates in the open pine lands. The song is somewhat similar to that of our *Tibicen auletes*, but the cadence is quicker and the tone is louder and more penetrating.

MEETING OF OCTOBER 21, 1930

A regular meeting of the New York Entomological Society was held on October 21, 1930.

The meeting was called to order at 8:10 P. M. in the Society's room at the American Museum of Natural History. The President, Mr. Davis, in the chair.

In the absence of Mr. Leng, Mr. Ruckes was appointed Secretary pro tempore.

Mr. Davis announced on the part of the program committee that at the meeting of November 18th Mr. S. W. Bromley would speak on "Hornet Habits."

Mr. Curran then read his paper on the collecting of flies. His tale regaled the Society with collecting incidents of the past years. During the course of the paper, the speaker brought up the very interesting question as to why certain species occur in periodic abundance alternating with periodic scarcity. He found this particularly true of the *Dolichopidæ* and believed that the only solution of the problem lay in making more observations of the habits and habitats of the species in the field. Thereupon Mr. Curran read some notes on the mating habits of certain species of the *Dolichopidæ*, emphasizing the fact that very little is known of the larvæ and other im-

mature stages of these flies. In many species of adults that were observed, it appears that the males are distinctly marked, in such a way as to represent secondary sexual characters and that prior to the actual mating an elaborate courtship between the sexes takes place. The males frequently take a position a short distance in front of the females and in various ways "show off" their striking markings, the males usually taking up such positions that the females will get the best view of their elaborate secondary sex characters. In certain species the males hover near the females and rapidly vibrate their wings before alighting on the female; the first trials are invariably unsuccessful and the procedure is repeated, sometimes a hundredfold. This is quite characteristic of the genus *Dolichopus*. In *D. plumipes* and *D. aldrichi* and many other species the tarsi of either the front or middle legs are provided with long fringes of hair which are waved in front of the females and in *D. plumipes* the male actually strokes the face of the female with the fringe.

After reading his paper Mr. Curran showed some lantern slides of pictures he had taken while on a trip to the Canal Zone. He emphasized the fact that the Sanitary Corps of the U. S. Army had produced an almost malaria—and yellow fever-free territory in this region. The slides illustrated a number of characteristic, Panama insects.

The paper was opened for discussion and Mr. Davis remarked that the gregarious habits of certain species might account for their limited distribution and their periodic scarcity, remarking that he felt that in many cases there were not enough individuals of the species to go around.

Mr. Glanz exhibited some exotic beetles which had been relaxed and prepared very quickly by him by a method which he promises to communicate to the Society.

Mr. Davis recalled the question raised by Dr. Lutz as to whether or not the scarcity of the monarch caterpillar was due to the infection of its caterpillars with the introduced gypsy moth disease. Mr. Davis read some records that showed there had been certain periods of scarcity prior to the introduction of that disease. While in 1922 and 1923 *D. plexippus* was very abundant, in 1920 only five specimens had been recorded from the metropolitan area by Mr. Frank E. Watson as recorded in the *Journal of the New York Entomological Society* for 1921.

Mr. Bromley remarked that in 1914 it had likewise been very scarce.

Mr. Davis opened a discussion on the destructiveness of cicadas. The *Asparagus* growers of Florida have been experiencing trouble with certain species, the immature stages of the insects feeding upon the root stocks of *A. plumosa*. Two species seem to be involved, viz: *Diceroprocta olympusa* and *Tibicen davisii*. Ironically *T. davisii* seems to be the cause of the trouble. Mr. Davis read extracts from an article by Mr. J. W. Wilson, in the September, 1930, number of the *Florida Entomologist* on the injury caused by cicadas at Jupiter. The article, however, does not mention the species, for at the time it was written identifications had not been received by Mr. Wilson.

Mr. Bromley exhibited some insects collected by Mr. E. Larch. These were Diptera and Hymenoptera.

Dr. Melander reported on his summer's activities, stating that he had collected at Redding, Connecticut and in the Maine woods. During the summer he revised his collection of Tabanidæ. He related how Mr. Shannon collected the rabbit bot-fly *Cuterebra* sp. along hillsides in Washington (State) by throwing clods of earth at flies out of reach and finding that the flies followed the bits of dirt to within capturing distance.

Mr. Davis wanted to know how the bot-fly larvæ got into the rabbits. The question remains unanswered.

Several members reported that they had found from experience that excellent collecting could be had on the insides of window panes of railroad stations, where lights attract the insects and the station rooms act as traps from which there is no easy escape.

HERBERT RUCKES,
Secretary, pro tem.

ERRATA

Please note below the correction of certain errors appearing in "A List of Hesperiidæ from Barro Colorado Island, Canal Zone, and Adjacent Panama," published in the March issue of this Journal:

Page 98, 1st line, read *Cobalus virbius* Cramer, (not *viribius*).

Page 104, 15th line, read *calvina*, (not *valvina*).

Page 106, 29th line, read *crotona* Hewitson, (not *cotona*).